

Modulators of Cellular Proliferation

ABSTRACT OF THE DISCLOSURE

The present invention relates to regulation of cellular proliferation. More particularly, the present invention is directed to nucleic acids encoding protein kinase C ζ (PKC- ζ), phospholipase C- β 1 (PLC- β 1), protein tyrosine kinase 2 (FAK), protein tyrosine kinase 2b (FAK2), casein kinase 2 (CK2), cMET tyrosine kinase (cMET), flap structure specific endonuclease 1 (FEN1), REV1 dCMP transferase (REV1), apurinic/apyrimidinic nuclease 1 (APE1), cyclin dependent kinase 3 (CDK3), PIM1 kinase (PIM1), cell division cycle 7 kinase (CDC7L1), cyclin dependent kinase 7 (CDK7), cytokine inducible kinase (CNK), potentially prenylated protein tyrosine phosphatase (PRL-3), serine threonine kinase 2 (STK2) or (NEK4), cyclin dependent serine threonine kinase (NKIAMRE), or histone acetylase (HBO1), which are involved in modulation of cell cycle arrest. The invention further relates to methods for identifying and using agents, including small molecule chemical compositions, antibodies, peptides, cyclic peptides, nucleic acids, RNAi, antisense nucleic acids, and ribozymes, that modulate cell cycle arrest via modulation of protein kinase C ζ (PKC- ζ), phospholipase C- β 1 (PLC- β 1), protein tyrosine kinase 2 (FAK), protein tyrosine kinase 2b (FAK2), casein kinase 2 (CK2), cMET tyrosine kinase (cMET), flap structure specific endonuclease 1 (FEN1), REV1 dCMP transferase (REV1), apurinic/apyrimidinic nuclease 1 (APE1), cyclin dependent kinase 3 (CDK3), PIM1 kinase (PIM1), cell division cycle 7 kinase (CDC7L1), cyclin dependent kinase 7 (CDK7), cytokine inducible kinase (CNK), potentially prenylated protein tyrosine phosphatase (PRL-3), serine threonine kinase 2 (STK2) or (NEK4), cyclin dependent serine threonine kinase (NKIAMRE), or histone acetylase (HBO1), as well as to the use of expression profiles and compositions in diagnosis and therapy related to cell cycle regulation and modulation of cellular proliferation, *e.g.*, for treatment of cancer and other diseases of cellular proliferation.

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